MULTIMEDIA UNIVERSITY®

STUDENT ID NO | | | | | | | | | | |

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2016/2017

MVR2053 – COLLABORATIVE VIRTUAL ENVIRONMENT

(All sections / Groups)

27 FEBRUARY 2017
9.00 a.m. - 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO THE STUDENTS

1. This Question paper consists of 3 pages including cover page with 6 questions only.

2. Answer only **4 (FOUR) out of 6 questions.** Total marks is 40 (FORTY) marks altogether. The distribution of the marks for each question is given accordingly at the end of each question.

3. Please write all your answers clearly in the Answer Booklet provided.

Question 1

A collaboration pattern is an instance of the framework, and comprises of "objects, actions, rules and steps, for participants with roles who meet at a location at a certain time, to collaborate on a common goal, in a context"

a. List down four key elements in designing networked collaborative virtual environment [4 marks]

b. As the designer for NCVE application, briefly explain three main things the designer should consider in designing of CVE application to be fit for their intended purposes? [6 marks]

Question 2

a. Scalability is one of the NCVE challenges. What is scalability and list down the factors that can be the cause for a scalability problem in NCVE? [4 marks]

b. Network Topology is the schematic description of a network arrangement and connecting various nodes (sender and receiver) through lines of connection. There are few types of network topology. List down any three of them and briefly explain how they works. [6 marks]

Question 3

a. Latency is the amount of time to transfer a bit of data from one point to another. Briefly discuss any four causes of the latency. [4 marks]

b. UDP is a user datagram protocol. How is the UDP different with transmission connection protocol (TCP) and list down all the UDP advantages? [6 marks]

Question 4

Sense of presence creates a virtual experience in NCVE.

a. Sensory environment is one of the factors that can create a sense of presence in NCVE design. Briefly discuss any three key factors in the **sensory environment** to enhance sense of presence in NCVE with example. [6 marks]

Continued...

b. Task is one of the components in creating NCVE experience. Discuss the role of task and why it's important in creating the experience in NCVE?

[4 marks]

Question 5

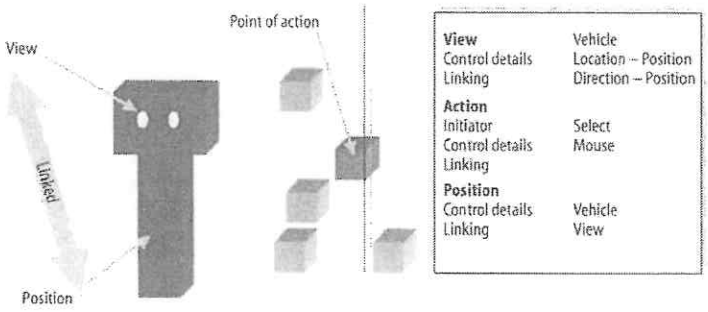

Figure 1

a. Referring to the Figure 1, all three engagement properties convey the affordances for engagement offered by an environment. Explain all three elements (view, action and position) suggested in Figure 1 diagram. Provide an example for each elements to support your answer. [6 marks]

b. What is the capability of the user vehicles in the engagement properties? Discuss it and give an example to support your explanation. [4 marks]

Question 6

From your class exercises and your own reading, discuss the CVE application that are available for social networking (both kids and adults) in terms of the design, the advantages and disadvantages, the challenges, user, network topologies, etc. You can also do a comparison between the social networking NCVE platform that are designed for kids and adult. Give an example to support your explanation. [10 marks]

End of Paper